RCA

6A7S

PENTAGRID CONVERTER

RENEWAL TYPE FOR MAJESTIC RECEIVERS

Heater■	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.3	amp.
Overall Length		4-9/32" to 4-17/32"
Seated Height		3-21/32" to 3-29/32"
Maximum Diameter (without shield)		1-9/16"
Bulb (with form-fitting shield)		ST-12
Cap		Small Metal
Base ▲*		Small 7-Pin

■ In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.
▲ Requires a different socket than the medium 7-pin base.
* Basing arrangement is the same as for the 6A7, except that the external shield on the 6A7S is connected to cathode.

Typical Operating Conditions and Curves for the 6A7S are the same as for Type 6A8.

6A8, 6A8-G, 6A8-GT ★

PENTAGRID CONVERTER

Heater■	Coated Unipotential Cathode			
Voltage	6.3		a-c or d-c volts	
Current	0.3		amp.	
Direct Interelectrode Cap.°	*6A8*	*6A8-G*	*6A8-GT*	
Grid #4 to Plate	0.06	0.26	0.26	μμf
Grid #4 to Grid #2	0.1	0.19	0.19	μμf
Grid #4 to Grid #1	0.09	0.16	0.16	μμf
Grid #1 to Grid #2	0.8	1.1	1.1	μμf
Grid #4 to All Other Electrodes (R-F Input)	12	9.5	9.5	μμf
Grid #2 to All Other Electrodes Except Grid #1 (Osc. Output)	5	4.6	4.6	μμf
Grid #1 to All Other Electrodes Except Grid #2 (Osc. Input)	6.5	6	6	μμf
Plate to All Other Electrodes (Mixer Output)	12	12	12	μμf
Overall Length	3-1/8" max.	4-7/32" to 4-15/32"	3-5/16" max.	
Seated Height	2-9/16" max.	3-21/32" to 3-29/32"	2-3/4" max.	
Maximum Diameter	1-5/16"	1-9/16"	1-5/16"	
Bulb	Metal Shell, MT-8	ST-12	T-9 ←	
Cap	Miniature	Skirted Min.	Skirted Min. Style C	

■ In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.
° With shell of 6A8 connected to cathode, and with close-fitting shield on 6A8-G and 6A8-GT connected to cathode.

← Indicates a change.

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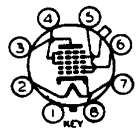
6A8, 6A8-G, 6A8-GT

PENTAGRID CONVERTER

(continued from preceding page)

	6A8	6A8-G	6A8-GT
Base	Small Wafer Octal 8-Pin	Small Shell Octal 8-Pin	Small Wafer Octal 8-Pin, Sleeve
Basing Designation	8A	G-8A	GT-8A

Pin 1 { 6A8, Shell; 6A8-G, No Con.; 6A8-GT, Base Sleeve }
Pin 2 - Heater
Pin 3 - Plate
Pin 4 - Grids #3 & #5



BOTTOM VIEW

Pin 5 - Grid #1
Pin 6 - Grid #2
Pin 7 - Heater
Pin 8 - Cathode
Cap - Grid #4

Mounting Position — Any

CONVERTER SERVICE

Plate Voltage		300 max.	volts
Screen (Grids #3 & #5) Voltage		100 max.	volts
Screen Supply Voltage		300 max.	volts
Anode-Grid (Grid #2) Voltage		200 max.	volts
Anode-Grid Supply Voltage*		300 max.	volts
Control-Grid (Grid #4) Voltage		0 min.	volts
Plate Dissipation		1.0 max.	watt
Screen Dissipation		0.3 max.	watt
Anode-Grid Dissipation		0.75 max.	watt
Total Cathode Current		14 max.	ma.
Typical Operation:			
Plate Voltage	100	250	volts
Screen Voltage	50	100	volts
Anode-Grid Voltage	100	–	volts
Anode-Grid Supply Voltage	–	250*	volts
Control-Grid Voltage	-1.5	-3	volts
Osc.-Grid (Grid #1) Resistor	50000	50000	ohms
Plate Resistance	0.6	0.36	approx. megohms
Conversion Transconductance	360	550	μmhos
Conver. Transcond. (approx.) with Control-Grid Bias of -20 volts	3	–	μmhos
Conver. Transcond. (approx.) with Control-Grid Bias of -35 volts	–	6	μmhos
Plate Current	1.1	3.5	ma.
Screen Current	1.3	2.7	ma.
Anode-Grid Current	2	4	ma.
Oscillator-Grid Current	0.25	0.4	ma.
Total Cathode Current	4.6	10.6	ma.

NOTE: The transconductance of the oscillator portion (not oscillating) is 1150 micromhos under the following conditions: plate volts, 250; screen volts, 55; control-grid volts, -2; anode-grid volts, 100; and oscillator-grid volts, -1. ←

* Anode-grid supply voltages in excess of 200 volts require use of 20000-ohm voltage-dropping resistor by-passed by 0.1 μf condenser.

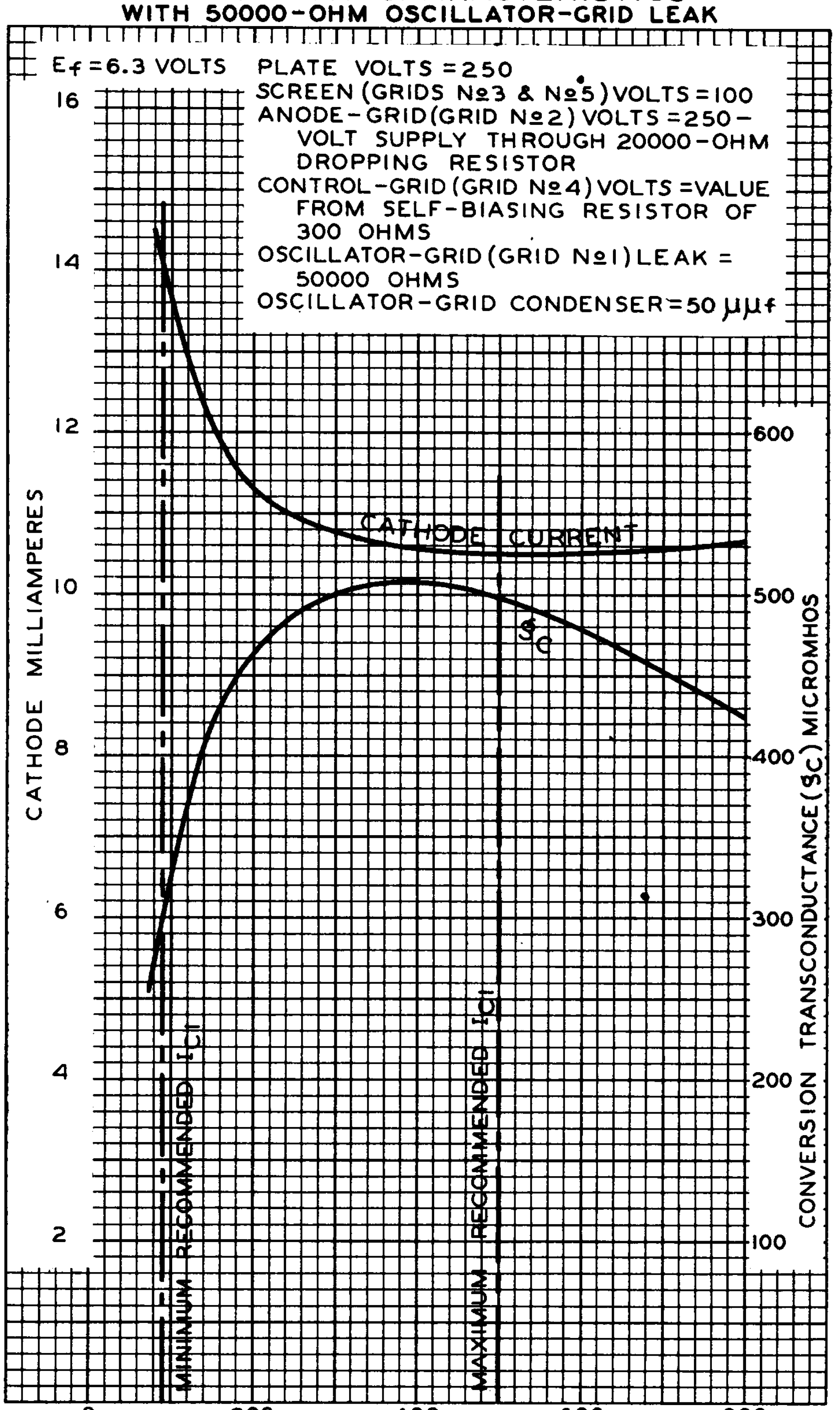
For Typical Circuit and Coil Design Details, refer to Type 2A7.

← Indicates a change.

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6A8

OPERATION CHARACTERISTICS
WITH 50000-OHM OSCILLATOR-GRID LEAK



DEC. 5, 1935

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